Timex Sinclair User Group NEWSLETTER

APRIL 1987 Ottawa Chapter

EDITOR — M. Dove Volume IV Issue I

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MEETINGS

LOCATION: All meetings are held at the NRC bldg,. 100 Sussex Dr. Ottawa. Check with security when signing in for the room number.

TIME:Meetings are held at 8.00 P.M. the second Tuesday of every month (no meetings in July or August).

FORMAT:
1)-President's Address and introduction of new members.
2)-Software review (max of 20 minutes).
3)-Hardware review (max of 20 minutes).
4)-Adjourment of the formal part of the evening.
5)-Informal: Members discuss common problems, swap programs, and exchange info (tips) etc.

MEETING DATES

April	14th
May	12th
June	9th
September	15th
October	13th
November	10th
December	8th

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ELECTION OF NEW OFFICERS

We were to have had election for new officers at our meeting in December. A severe winter storm resulted in a poor turnout. It was decided to postpone our elections to the next month. Unfortunately, our meeting in January coincided with another night of bad winter weather. It wasn't till the February meeting that we were able to have elections for this year.

The following positions were to all members present.

President
Admin. Officer
Software Rep.
Hardware Rep.
Treasurer
Librarian

A special vote of thanks must be given to Alan Moore who acted as President in addition to his responsiblities as Admin Officer. Our President was unable to complete his responsibilties last year (extenuating circumstances). D.C. Raymond-Jones did a fantastic job as Hardware rep. As usual we could not have gotten along without the help of David Solly and Iris Ten-Holder (Librarian & Treasurer).

For the year 1987 we have the following officers.

President - Alan Moore
(226-7118)
Admin. - Michael Dove
(745-1779)
Software - Bill Harmer
(722-7184)
Hardware - John Mathewson
(746-7669)
Librarian - David Solly
(731-2120)
Treasurer - Iris Ten Holder
(828-6668)

FROM: THE EDITOR

A new year and new blood. I am am attempting to take over the job of the newsletter for the club. Please bear with me as I get my feet wet. It takes a little while to get into the swing of things. This is my first newsletter since taking over the responsibilities in February.

Thank-you to all who have given me data for the newsletter (especially B. Harmer and David Solly). Not all the articles submitted will appear in the newsletter at this time.

As usual I, like previous editors, makes the request for articles for the newsleter. Everyone has something to contribute. We'll take all kinds of formats. Type written, hand written, tapes and program listings. With the tapes let me know whether they were typed in on with Tasword or Mscript. When submitting listings, originals will be appreciated but good photocopies will do.

What type of articles am I interested in? Well just about anything. Have you bought some software recently? How about that computer magazine that you subscribe to? How about your computer itself, what do you have and what have you aded on? Well then write us a review article (no matter how small). How does the software rate? Was it worthwhile or was it a rip off? What about your own programs? If it was important to you to develope than share the ideas with some of the rest of us.

For those of us with modems let us know the good points and bad points of transfering programs over the phone. Especially information such where and how to get in contact with the various billboards. Another inportant aspect is the cost. Give us laymen an idea what it put us back.

Thanks for listening and thanks for your contributions. Please keep them coming.

Michael Dove

MEETINGS IN REVIEW

For those of us who are not always able to attend our monthly meetings you might be interested in a summary of the highlights of those meetings (January through March 1987).

Since we have a number of members who only own the ZX81 I try to have some programs of interest for that group. From my repetoire I dug out two (common domain) programs. Mousemaze a game which uses a MC program to scan the keyboard and allows the mouse to move horizontally, vertically and diagonally. The second program (Digital clock) displays time (in large blocks) on the screen. These programs are now in the Library. Also in the library is my own program which monitors the system variables (Memory Status).

I typed in a program called Fast Forward (Your Sinclair May 1986, p. 86) which allows almost a three fold decrease in load time (Spectrum). For our next newsletter I will have it converted to run on the TS-2068.

Colin, who had recently returned from a visit to England, demonstrated his newest acquistion, THE MOUSE. Boy is it great. As you might expect it will only run in the Spectrum mode. The mouse is hocked up to the computer and as you move it over a hard surface the mouse will move around the screen. You are able to pick up various functions from the list of functions displayed on the side of the screen (painting, artistic fuctions, printing, fonts and many more are at your command). Perhaps later we will have Colin give a more complete review of the MOUSE. Colin has also purchased the Disciple (Spectrum mode) and gave a brief demonstration. It requires a microdrive as various parts of the program must be uploaded on demand. When he is more familiar with its capabilities he will give us a review.

John Mathewson ordered a new corrected version of the 2068 ROM with the errors removed. It arrived, in due course, and was a shoddy conglomerate of wires. John is going to unravel the poor wiring and let us know whether the supposedly new ROM really does its job. Later we will have John give a review on this ROM.

*************** NOTE WELL ********************

John has also developed an interface card for the TS-2068. Many people have tried unsuccesfuly to rewire the 2068 to a keyboard. Usually with only partial success. Usually most but not all the keys will be operative. John has built an INTERFACE CARD which is inserted into the cartridge port of the TS-2068. In turn it is connected to a rewired key board. I bought the INTERFACE CARD and KEYBOARD for seventy nine ($79.00). IT WORKS GREAT!!!!! At last I can touch type at the speed that I am capable of doing and not limited by either the response time of the original TS-2068 keyboard or have to worry that the space bar will not work. John also has a TWISTER which does the same as the INTERFACE CARD. Instead of going through the cartridge port it is connected to the rear edge connector. This is essential for those who use the cartridge port to connect their modem, disc drive or extended RAM. The twister will also work on the ZX81 and eliminates the necessity of rewiring the ZX81 for a keyboard. For further information feel free to contact John.

John Mathewson
1852 Appleford Street
Gloucester, Ontario
Canada K1J 6T4
(613)-746-7869

****

Bill Harmer has been doing a variety of programs for the ZX81. These include interest calculation and a math program. These programs are still in the development stage and perhaps we will see more about them later. A rather interesting program that Bill has developed is a TV monitor and Pattern Generator. It has utility in calibrating screen display for correct horizontal and vertical displacement. Another program, nearly completed is his HELPMATE. For those who do not like to program this has a user friendly style to aid in formula calculation, Data base manipulation and others. Perhaps we will see a finished product in the not to distant future.

David Hinson gave us an excellent display of his X-Y plotter. He has developed a program for doing architectural style drawings on the screen. The screen is the in turn scanned and the image transfered to the X-Y plotter. The final print can be of almost any size and the capacity exists for using more than one color in the final print out.

ZX81 PROGRAMS

CHILD1

A very simple visual program to teach pre-school children their numbers from one to 10. Some modification around line 660 could be made to make it a litle bit more user friendly. It would be interesting to see what modifications others would make to make this more useful for young children.

Bill Harmer

```
  1 REM YOUNG CHILDRENS NUMBER
    PROGRAM BY BILL HARMER,OTTAWA
    1987
  2 REM PUBLIC DOMAIN PROGRAM
    FROM OTTAWA-HULL TIMEX SIN-
    CLAIR USER GROUP,CANADA
  3 REM
  4 REM  UNABLE TO PRINT THE
GRAPHIC CHARACTERS. LOOK UP IN
YOUR CHARACTER SET FOR THE
ACTUAL GRAPHIC CHARACTERS WHICH
OUGHT TO BE TYPES IN.
  5 REM
  6 REM INITIAL DISPLAY
 10 FOR N=1 TO 78
 20 PRINT "12";
 30 PRINT "34";
 35 PRINT "56";
 40 PRINT "789";
 50 NEXT N
 60 PRINT "12"
 80 FOR X=1 TO 35
100 NEXT X
 110 CLS
 440 REM  UNABLE TO PRINT THE GR
APHIC CHARACTERS. LOOK UP IN YOU
R CHARACTER SET FOR THE ACTUAL G
RAPHIC CHARACTERS WHICH OUGHT TO
 BE TYPES IN.
 450 LET A$="CHR$ CODE 133"
 470 LET A$="CHR$ CODE 5"
 480 PRINT AT 20,1;"
          "
 490 FOR N=1 TO 9
 500 PRINT AT 1,14;"CHR$ CODE 7,
3,132"
 510 PRINT AT 2,14;"CHR$ CODE 5,
0,133"
 530 PRINT AT 3,14;"CHR$ CODE 13
0,131,129"
 570 PRINT AT 2,15;N
 580 FOR X=1 TO N
 590 PRINT AT 5,4+(X*2);A$;" ";
 620 NEXT X
 625 PRINT AT 20,1;"PRESS ANY KE
Y TO GO ON"
 630 IF INKEY$="" THEN GO TO 630
 635 CLS
 640 NEXT N
 650 CLS
 660 PRINT AT 12,11;">>>>> ?"
 690 LET A$=INKEY$
 700 IF INKEY$="" THEN GO TO 690
 705 LET A$=CHR$ (CODE A$+128)
 710 PRINT AT 12,17;A$
 720 FOR X=0 TO 31
 730 PRINT "-";
 740 NEXT X
 750 CLS
 760 GO TO 480
9000 REM CASSETTE SAVE
9010 CLS
9020 SAVE "CHILD1"
9030 GO TO 1
```

```
9500 REM DISK SAVE
9510 PRINT USR 14336
9520>REM SAVE"CHILD1.B0"
9530 SLOW
9540 CLS
9550 GO TO 1
```

VROP

Bill Harmer has an interest in electronics. He devised this program to help calculate the various electrical components for a voltage regulator circuit. If you are interested in the program we have it in our library.

```
   0>REM 741 DRIVEN VOLTAGE REG-
ULATOR DESIGN PROGRAM,COPYRIGHT
BY BILL HARMER,OTTAWA,1984,ALL R
IGHTS RESERVED
   1 REM VR OP 10,A VOLTAGE REG-
ULATOR CIRCUIT DESIGN PROGRAM
USING A 741 OP-AMP AND NPN
TRANSISTOR,COPYRIGHT BY BILL
HARMER, OTTAWA, 1984,1986
   3 CLS
   4 REM FOR THE PERSONAL USE OF
TIMEX/SINCLAIR USER GROUP MEM-
BERS ONLY (NO LIABILITY FOR
BURNED TRANSISTORS,FINGERS,ETC.
IS ACCEPTED BY THE AUTHOR SINCE
ELECTRONICS IS AN  EXPERIMENTAL
SCIENCE.MURPHYS LAW APPLIES.)
   5 REM GOTO 9000 TO SAVE ON CA
SS-ETTE
  14 REM NOTE THE GRAPHIC CHARAC
TERS IN LINE 15
  15 PRINT AT 7,0;"TYPE 32 GRAPH
  15 PRINT AT 7,0;"TYPE 32 GRAPH
IC CHARACTERS (CHR$ CODE 10, SHI
FTED GRAPHIC S)";AT 13,0;"TYPE 3
2 GRAPHIC CHARACTERS(CHR$ CODE 1
0,SHIFTED GRAPHIC S)"
  16 PRINT AT 17,1;"COPYRIGHT 19
84 BY BILL HARMER"
  20 PRINT AT 10,0;"OP AMP VOLTA
GE REGULATOR DESIGN"
  35 PRINT AT 20,0;"PRESS ENTER
TO GO ON"
  40 INPUT B$
  45 CLS
  50 PRINT "THIS PROGRAM WILL DE
SIGN A VOLT-AGE REGULATOR USING
AN NPN TRAN-SISTOR DRIVEN BY A 7
41 I.C.      OP AMP"
  55 GO TO 57
  56 LET S=1
  57 PRINT
  58 PRINT "PRESS ENTER TO GO ON
"
  60 CLS
  61 PRINT "CHOOSE A ZENER DIODE
 THAT HAS A ZENER VOLTAGE 0.7 VO
LTS HIGHER  THAN THE DESIRED OUT
PUT VOLTAGE. IF NECESSARY AD A 1
N914 IN      SERIES WITH THE ZENE
R TO RAISE  THIS VOLTAGE +0.7 V.
"
  62 LET S=0
  64 PRINT "*A 400 MW TO 1 WATT
ZENER DIODE CAN BE USED*"
  65 PRINT
  70 PRINT "ENTER THAT ZENER VOL
TAGE (OR IF 1N914 USED ZENER V.+
0.7V) NOW"
  80 INPUT Z
  85 IF Z>26 THEN PRINT "ZENER V
OLTAGE MUST BE UNDER 26 VOLTS"
  86 IF Z>26 THEN GO TO 60
  90 CLS
  95 PRINT "OUTPUT VOLTAGE WILL
BE ";Z-0.7;"VOLTS"
  97 PRINT
  98 PRINT "ENTER ""OK"" IF THIS
 IS OK OR     ""TRY"" IF YOU WANT
 TO TRY AGAIN TO CHANGE IT"
  99 INPUT A$
 100 IF A$="TRY" OR A$="T" OR A$
="AGAIN" THEN GO TO 60
 102 IF A$<>"OK" AND A$<>"O.K."
AND A$<>"OKAY" AND A$<>"T" AND A
$<>"TRY" THEN GO TO 98
 105 PRINT "ENTER MAXIMUM INPUT
VOLTAGE FOR VOLTAGE REGULATOR NO
W"
 110 INPUT V
 120 CLS
 130 IF V>30 THEN PRINT "INPUT
VOLTAGE IS TOO HIGH FOR  THIS OP
-AMP. TRY AGAIN"
 140 IF V<5 THEN PRINT "THIS VOL
TAGE IS TOO LOW FOR OP- AMP. TRY
 AGAIN"
 150 IF V<Z+3.3 AND S<>1 THEN PR
INT "INPUT VOLTAGE IS TOO LOW FO
R     OUTPUT VOLTAGE REQUIRED OF
THE   CIRCUIT. TRY AGAIN"
 155 IF V<Z+2.3 AND S=1 THEN PRI
NT "INPUT VOLTAGE IS TOO LOW FOR
     OUTPUT VOLTAGE REQUIRED OF T
HE  CIRCUIT. TRY AGAIN"
 160 IF V>30 OR V<5 OR V<Z+3.3 T
HEN GO TO 56
 165 IF S=1 AND V<Z+2.3 THEN GO
TO 56
 170 IF S=1 THEN GO TO 250
 180 PRINT "NOW ENTER MINIMUM IN
PUT VOLTAGE.IF IT IS THE SAME AS
 MAXIMUM    (";V;" VOLTS) ENTER
THAT"
 190 INPUT N
 200 CLS
 210 IF N=V THEN LET S=1
 220 IF N=V THEN LET V=1.1*V
 230 IF S=1 AND V/1.1<>N/0.9 THE
N LET N=N*0.9
 240 IF S=1 THEN GO TO 130
 250 IF N<5 THEN PRINT "MINIMUM
INPUT VOLTAGE IS TOO LOWFOR OP-A
MP.TRY AGAIN"
 260 IF N<Z+3.3 AND S<>1 THEN PR
INT "MINIMUM INPUT VOLTAGE IS TO
O LOWFOR CIRUIT TO OUTPUT ";Z-0.
7;" VOLTS. TRY AGAIN"
 265 IF N<Z+2.3 AND S=1 THEN PRI
NT "MINIMUM INPUT VOLTAGE IS TOO
 LOWFOR CIRUIT TO OUTPUT ";Z-0.7
;" VOLTS. TRY AGAIN"
 270 IF N<5 THEN GO TO 56
 272 IF S<>1 AND N<3.3 THEN GO T
O 56
 275 IF S=1 AND N<Z+2.3 THEN GO
TO 56
 280 PRINT "ENTER MINIMUM BETA (
HFE) OF THE NPN PASS TRANSISTOR
YOU WILL BE  USING IN THE CIRCUI
T NOW"
 290 INPUT B
 300 CLS
 310 PRINT "ENTER THE MAXIMUM CO
LLECTOR CUR-RENT OF THE TRANSIST
OR YOU WILL USE NOW (IN MA)"
 320 INPUT M
 325 CLS
 330 LET C=M/1000
 340 PRINT "ENTER THE POWER DISS
IPATION OF  THE TRANSISTOR (**IN
 MILLIWATTS*) NOW"
 350 INPUT P
 360 LET D=P/1000
 365 LET O=D/((V-(Z-0.7))*3)
 370 REM LET O=C/5
 371 REM SET OPERATING CURRENT
 372 IF O>B*.010 THEN LET O=B*0.
010
 373 IF (V-(Z-0.7))*O>D*0.85 THE
N PRINT "POWER DISSIPATED IS TOO
 MUCH FOR TRANSISTOR-TRY AGAIN"
 374 IF (V-(Z-0.7))*O>D*0.85 THE
N GO TO 61
 375 IF O<1 THEN PRINT "  OPTIMU
M MAXIMUM CURRENT OUTPUT=";1000*
O;"MA."
 376 IF O>=1 THEN PRINT "  OPTIM
UM MAXIMUM CURRENT OUTPUT=";O;"A
MP."
 380 IF (V-(Z-0.7))*O>D/2 AND (V
-(Z-0.7))*O<=D*0.85 THEN PRINT "
POWER DISSIPATED IS NEAR MAXIMUM
OF TRANSISTOR"
 390 PRINT "***NOTE ZENER RESIST
OR IS CLOS- EST VALUE TO ";INT (
(N-Z)/0.008);" OHMS"
 392 PRINT
 393 PRINT "PRESS ENTER TO GO ON
"
 395 INPUT A$
 398 CLS
 399 GO SUB 1000
 420 PRINT "TO TRY AGAIN ENTER""
TRY"" IF NOT ENTER ""QUIT"""
 430 INPUT A$
 435 CLS
 440 IF A$="QUIT" OR A$="Q" THEN
 STOP
 450 IF A$="TRY" OR A$="T" THEN
GO TO 505
 460 IF A$<>"TRY" AND A$<>"T" AN
D A$<>"QUIT" AND A$<>"Q" THEN PR
INT "ANSWER ""TRY"" OR ""QUIT""
ONLY"
 470 IF A$<>"TRY" AND A$<>"T" AN
D A$<>"QUIT" AND A$<>"Q" THEN GO
 TO 420
 510 GO TO 11
1000 REM CIRCUIT CONNECTIONS
1010 PRINT "***THE CIRCUIT***"
1015 PRINT "PIN NUMBERS REFER TO
 PINS OF 741OP-AMP (8 PIN DIP VE
RSION)"
1020 PRINT "CONNECT PIN 4 AND TH
E ANODE OF  THE ZENER DIODE TO T
HE NEGATIVE TERMINAL OF THE UNRE
GULATED D.C.POWER SUPPLY. THIS A
LSO IS THE  NEGATIVE V. OUTPUT"
1025 PRINT
1030 PRINT "CONNECT ONE END OF T
HE RESISTOR (APPROX. ";INT ((N-Z
)/0.008);" OHMS.), PIN 7, AND TH
E NPN TRANSISTORS COLLECTOR TO T
HE POSITIVE TERMINAL OF THE D.C
UNREGULATED POWER SUPPLY"
1035 PRINT
1040 PRINT "CONNECT THE OTHER EN
D OF THE    RESISTOR AND THE CAT
HODE (RING- ED END) OF THE ZENER
 DIODE TO PIN 3"
1050 PRINT "***PRESS ENTER TO GO
 ON"
1060 INPUT A$
1070 CLS
1080 PRINT "CONNECT PIN 2 AND  T
HE TRANSIST-OR EMITER TO THE OUT
PUT OF THE CIRCUIT (POSITIVE SOU
RCE OF     ";Z-0.7;" VOLTS REGUL
ATED OUTPUT)"
```

```
1095 PRINT "CONNECT PIN 6 TO THE
 TRANSISTOR BASE LEAD"
1096 PRINT
1100 PRINT "ADDITIONAL PROTECTIV
E COMPONENTSADVISABLE TO ADD ARE
-(1) A FAST-BLOW FUSE ON OUTPUT,
(2) A 1N400DIODE ANODE TO EMITER
 AND CATH- ODE TO COLLECTOR"
1105 PRINT "SPECS--OUTPUT VOLTAG
E=";Z-0.7;" VOLTS. ZENER DIODE V
OLTAGE=";Z;"VOLTS.   1/2 WATT RE
SISTOR (CLOSEST STANDARD VALUE T
O ";INT ((N-Z)/.008);" OHMS"
1106 IF O<1 THEN PRINT "CONSERVA
TIVE MAX CURRENT RATING=";O*1000
;" MA"
1107 IF O>=1 THEN PRINT "CONSERV
ATIVE MAX CURRENT RATING=";O;" A
MPS"
1109 PRINT
1110 PRINT "ENTER ""BACK"" TO GO
 BACK TO CIRC-UIT DETAILS, OR ""
ON"" TO CONTINUE"
1120 INPUT A$
1125 CLS
1130 IF A$="BACK" OR A$="B" THEN
 GO TO 1000
1135 IF A$<>"ON" AND A$<>"O" AND
 A$<>"BACK" AND A$<>"B" THEN PRI
NT "ANSWER ONLY ""BACK"" OR ""ON
"". TRY AGAIN"
1140 IF A$<>"ON" AND A$<>"O" AND
 A$<>"BACK" AND A$<>"B" THEN GO
TO 1110
1150 RETURN
9000 REM SAVE ROUTINE
9001 CLS
9005 PRINT "CASSETTE SAVE ROUTIN
E BEGINS"
9010 PAUSE 250
9020 CLS
9030 SAVE "VROP"
9040 GO TO 7
9500 PRINT USR 14336
9510 REM SAVE"L-VROP.B7"
9520 REM PLEASE INSERT THE ZX81
COMMAND SLOW
9530 CLS
9540 GO TO 7
```

THREE QUICKIES

We have a few new members in our club who have only the ZX81 and not the 2068. Some are just begining to learn the basic programming language. Here are three simple programs which can help you learn a few new techniques. The first program requires poking of machine code. If you don't know how to poke in MC then grab someone in the club to teach you.

Michael Dove

SCREEN FILL

A simple Machine code program that will run with 1K of memory. It will fill the screen with any single normal or graphic character.

```
   1 REM 1234567890123456
   2 REM THE MACHINE CODE FOR SC
 REEN FILL IS IN THE FIRST REM ST
 ATMENT. IT OCCUPIES POSITIONS 16
 514 TO 16529. THE VALUES MUST BE
  POKED INTO THE FIRST REM STATME
 NT. THE VALUES ARE 62,48,6,4,14,
 176,215,13,194,136,64,5,194,134,
 64,201
  10 RANDOMIZE USR 16514
  20 INPUT A$
  30 POKE 16515,CODE A$
  35 CLS
  40 RUN
```

STOP-WATCH

This simple program acts as a stop watch. Note the poke commands in lines 20 and 30. They reset frames to 65536. Thus the max time is 18.2 min.

```
  1 REM THIS PROGRAM WAS TAKEN
FROM S.U.N. MARCH 1983 PAGE 24.
 10 PRINT AT 5,5;"TIMER ON"
 20 POKE 16436,255
 30 POKE 16437,255
 40 LET A=(65536-PEEK 16436-256
*PEEK 16437)/60
 50 IF INKEY$<>"" THEN GO TO 70
 60 GO TO 40
 70 PRINT AT 5,5;A+1;" SECONDS"
```

FLASHING PROMPTS

You would be surprised how many people do not know how to do them. Well here is a simple example. Give it a try.

```
  1 REM THIS PROGRAM WAS TAKEN
FROM S.U.N. MARCH 1983 PAGE 11.
 10 LET A$="
                    "
 20 LET B$="PRESS ANY KEY"
 30 LET C$="NO MORE FLASHING"
 40 PRINT AT 12,9;B$
 50 FOR I=1 TO 20
 60 NEXT I
 70 PRINT AT 12,0;A$
 80 FOR I=1 TO 20
 90 NEXT I
100 IF INKEY$="" THEN GO TO 40
110 PRINT AT 12,8;C$
```

2068 PROGRAMS

The following program was developed by Bill Harmer for the ZX81 and subsequently modified by David Solly for the TS-2068. Any of our fellow user groups are welcome to use this program for their own personal use.

```
   1>REM
SECRET AGENT IS A PROGRAM FOR
THE SINCLAIR 2068 WHICH IS
DESIGNED TO MAKE CODING AND DE-
CODING CHILDSPLAY. ORIGINAL PRO-
GRAM BY BILL HARMER CONVERTED TO
THE 2068 BY DAVID SOLLY, OTTAWA,
ONTARIO, 1985.
  11 REM SECRET AGENT 8
     (FINISHED)
  30 CLS : POKE 23658,8
  50 DIM X(100)
  60 PRINT AT 10,0;"*           SE
CRET AGENT           *"
  65 PRINT AT 9,0;"*
                    *"
  67 PRINT AT 11,0;"*
                    *"
  70 PRINT AT 8,0;"*
                    *"
  72 PRINT AT 12,0;"*
                    *"
  75 PRINT AT 7,0;"**************
*******************"
  77 PRINT AT 13,0;"*************
********************"
  90 PRINT ; FLASH 1;AT 21,0;"PR
ESS  ENTER  KEY TO GO ON"
  95 INPUT A$
  96 CLS
  97 IF A$="SESAME" THEN GO TO 9
000
 100 PRINT "SECRET AGENT IS A PR
OGRAM          DESIGNED TO ENCODE A
ND DECODE      SECRET MESSAGES"
 101 PRINT
 102 PRINT "A MESSAGE IS ENTERED
 AND THE       COMPUTER WILL CONVER
T IT TO A      SEQUENCE OF UNINTELL
IGIBLE         NUMBERS. THE MESSAGE
 CAN BE        DECIPHERED BY ANOTHE
R PERSON       HAVING THE SAME PROG
RAM"
 103 PRINT
 104 PRINT "ONE MUST KNOW HOWEVE
R WHICH OF     THE FOUR CODING OPTI
ONS HAVE       BEEN USED"
 105 PRINT
 106 PRINT "VARYING THE CODING O
PTION MAKES THE CODE MORE SECURE
"
 110 PRINT ; FLASH 1;AT 21,0;"PR
ESS ENTER TO GO ON"
 112 INPUT A$
 114 CLS
 115 PRINT ; FLASH 1;"ENTER"; FL
ASH 0;" CODE OR DECODE DEPEN
D-ING ON WHETHER YOU WISH TO COD
E A NEW MESSAGE OR DECODE A CODE
D MESSAGE"
 120 INPUT M$
 130 CLS
 140 PRINT ; FLASH 1;"ENTER"; FL
ASH 0;" WHICH CODE YOU  ARE USIN
G (1, 2, 3, OR 4)"
 150 INPUT W
 155 PRINT
 160 IF W<>1 AND W<>2 AND W<>3 A
ND W<>4 THEN PRINT AT 10,0;"ENTE
R ONLY ONE OF THE NUMBERS 1,2,3
OR 4. TRY AGAIN"
 170 IF W<>1 AND W<>2 AND W<>3 A
ND W<>4 THEN GO TO 150
 180 LET I=W
 190 IF W=2 THEN LET I=5
 200 IF W=4 THEN LET I=7
 210 REM "I" IS EXTRA INCREMENT
OF SUBSTITUTION,HERE SET TO 1,3,
5 OR 7 (BY CODE 1,3,2,4)
 220 CLS
 300 IF M$="CODE" OR M$="C" THEN
 GO TO 1000
 310 IF M$<>"CODE" AND M$<>"DECO
DE" AND M$<>"C" AND M$<>"D" THEN
 GO TO 115
 320 IF M$="D" OR M$="DECODE" TH
EN GO TO 2000
 330 GO TO 115
 950 PRINT : PRINT "THIS PROGRAM
 USES ";38912- FREE ;"BYTES"
 990 STOP
1000 REM ENCODING ROUTINE
1010 PRINT "PROGRAM TO CODE A NE
W MESSAGE"
1020 PRINT "USING CODE NUMBER ";
W
1030 PRINT
1040 PRINT "ENTER YOUR MESSAGE N
OW (UP TO   100 CHARACTERS=APPRO
X. 20 WORDS)"
1045 PRINT
1050 PRINT "IF YOUR MESSAGE IS L
ONGER BREAK IT UP INTO SMALLER M
ESSAGES AND CODE THEM SEPARATELY
"

1055 PRINT
1060 PRINT ; FLASH 1;"ENTER MESS
AGE NOW"
1070 INPUT A$
1080 CLS : PRINT ; FLASH 1;"WAIT
"

1085 PRINT : PRINT : PRINT
1100 LET F$=""
1110 REM IN OTHER COMPUTERS LINE
 1210 WOULD BE- U$=MID$(A$,N,1)
1200 FOR N=1 TO (LEN A$)
1210 LET U$=A$(N TO N)
1220 LET Y=(CODE (U$))
1225 IF Y<33 OR Y>90 THEN GO TO
1300
1226 REM Y<33 OR Y>90 WOULD BE U
SED FOR LINE 1225 FOR ASCII
1230 LET Y=Y+7+I
1232 REM ZX-81 VALUES 63 & 53
           IN LINE 1240
1240 IF Y>90 THEN LET Y=Y-58
1245 REM IF Y>90 THEN LET Y=Y-58
 WOULD BE USED FOR LINE 1240 FOR
ASCII
1250 LET T$=STR$ Y
1270 LET F$=F$+T$+","
1300 NEXT N
1310
1340 CLS : PRINT "MESSAGE IS:",,
F$
1400 PRINT AT 20,0;"PRESS ENTER
TO CODE AGAIN OR    ENTER  B  TO
 GO BACK TO START"
1410 INPUT A$
1420 CLS
1440 IF A$="B" OR A$="BEGIN" THE
N GO TO 100
1460 GO TO 1000
2000 REM DECODING ROUTINE
2010 PRINT "PROGRAM TO DECODE A
NEW MESSAGE"
2020 PRINT "USING CODE NUMBER ";
W
2030 PRINT
2040 PRINT "ENTER THE CODED TEXT
 COMPLETE   WITH COMMAS BETWEEN
THE NUMBERS"
2045 PRINT
2050 PRINT "UP TO 100 NUMBERS AR
E ALLOWED INTHE TEXT";
2055 PRINT "(NO SPACES ARE PLACE
D IN THE DECODED TEXT)"
2060 PRINT
2065 PRINT ; FLASH 1;"ENTER MESS
AGE NOW"
2070 INPUT P$
2080 CLS : PRINT ; FLASH 1;"WAIT
"

2085 PRINT : PRINT : PRINT
2090 LET G$=""
2100 REM IN OTHER COMPUTERS FOR
LINE 2210 SAY-U$=MID$(P$,N,1) AN
D 2215 V$=MID$(P$,N+1,1)
2200 FOR N=1 TO (LEN P$) STEP 3
2210 LET U$=P$(N TO N)
2215 LET V$=P$(N+1 TO N+1)
2217 LET M=((N-1)/3)+1
2220 LET X(M)=VAL (U$+V$)
2230 IF X(1)=0 THEN LET P$=F$
2235 IF X(1)=0 THEN GO TO 2090
2237 LET X(M)=(X(M)-7)-I
2240 IF X(M)<=32 THEN LET X(M)=X
(M)+58
2250 REM IF X(M)<33 THEN LET X(M
)=X(M)+58 FOR ASCII IN LINE 2240
2260 LET G$=G$+CHR$ (X(M))
2290 NEXT N
2295
2300 REM "0000"(4 ZEROS) ENTERED
 WILL RESULT IN PREVIOUSLY CODED
 TEXT BEING ENTERED FOR DECODING
 AS A TEST
2320 CLS : PRINT "MESSAGE IS:",,
G$
2350 PRINT AT 20,0;"PRESS ENTER
TO DECODE AGAIN OR  ENTER  B  TO
 GO BACK TO START"
2360 INPUT A$
2365 CLS
2370 IF A$="B" OR A$="BEGIN" THE
N GO TO 100
2380 GO TO 2000
9000 CLS : CLEAR
9010 PRINT "Cassette save begins
"

9025 SAVE "007" LINE 30
9030 SAVE "007" LINE 30
9032 CLS : PRINT "Verification"
9035 VERIFY "007"
9040 VERIFY "007"
9050 GO TO 30
9060 STOP
```

SCREEN DISPLAY

Upload 2000 (a program to upload a ZX81 program to the TS-2068) has a very interesting opening screen display. I have taken this part of the program, modified it and simplified it for ease of understanding. It is just begging to be modified. Give it a try it is rather neat.

Michael Dove

```
   1 GO SUB 20
   2 GO SUB 80
   3 STOP
  20 FOR x=20 TO 0 STEP -1
  26 BEEP .006,40-x*2
  30 PRINT AT x+1,0;TAB 31;
  40 PRINT AT x,x;"TS-2068"
  50 PRINT AT x,31-7-x;"PRESENTS
"
  60 NEXT x
  70 RETURN
  80 LET l=10
  90 LET z$="........... THE ...
........": LET x=l-2: LET y=2: G
O SUB 1000
 100 LET z$="GAME ": LET x=l: LE
T y=5: GO SUB 1000
 110 LET z$="of the": LET y=14:
GO SUB 1000
 120 LET z$="YEAR": LET y=23: GO
 SUB 1000
 130 RETURN
```

```
"
  60 NEXT x
  70 RETURN
  80 LET l=10
  90 LET z$="........... THE ...
........": LET x=l-2: LET y=2: G
O SUB 1000
 100 LET z$="GAME ": LET x=l: LE
T y=5: GO SUB 1000
 110 LET z$="of the": LET y=14:
GO SUB 1000
 120 LET z$="YEAR": LET y=23: GO
 SUB 1000
 130 RETURN
```

```
1000 REM
1010 FOR t=7 TO 0 STEP -1
1015 BEEP .005,t: BEEP .005,60-t
: BEEP .005,30-t
1020 PRINT AT x,y; INK t-INT (t/
8)*8;z$
1030 NEXT t
1040 RETURN
```

NEW FONT

A very interesting program which alters the character font for either the 2068 or the Spectrum. The characters have a very bold script. If you ask for a print out with the 2040 printer the letters are very black and easy to read. If you are using in conjunction with another very large program you may over write the upper part of memory.

David Solly

```
   1 CLS
   2 LIST
  10 REM ------------------------
         Nouveau jeu de
         caracteres
       ------------------------
  12 REM ------------------------
       Spectrum 48K, adaptable
       sur 16K
       ------------------------
  14 REM
  15 CLEAR 64511
  20 BORDER 0: PAPER 0: INK 7: C
LS
  30 LET org=(PEEK 23606+256*PEE
K 23607)+256: REM origine egale
a CHARS+256
  40 LET des=64512: REM Destinat
ion la plus pratique pour 48K
  70 PRINT AT 20,6; FLASH 1;"Att
endez 1 minute"
  99 REM ////////////////////////
 100 REM  transfert et modific.
 101 REM ////////////////////////
 110 FOR i=des TO des+768
 111 LET b=PEEK org
 115 POKE i,b
 120 IF b/4=INT (b/4) THEN POKE
i,b+2
 125 IF b/8=INT (b/8) THEN POKE
i,b+4
 130 IF b/16=INT (b/16) THEN POK
E i,b+8
 135 IF b/32=INT (b/32) THEN POK
E i,b+16
 140 IF b/64=INT (b/64) THEN POK
E i,b+32
 150 IF b=0 THEN POKE i,0
 160 IF b=66 THEN POKE i,b+32
 170 LET org=org+1
 180 NEXT i
 199 REM ////////////////////////
 200 REM   affichage du resultat
 201 BORDER 7: PAPER 7: INK 0
 200 REM   affichage du resultat
 201 BORDER 7: PAPER 7: INK 0
 210 CLS : POKE 23607,des/256-1
 220 PRINT "POKE 23607,";des/256
-1
 230 PRINT : GO SUB 300: PRINT
 240 POKE 23607,60
 250 PRINT "POKE 23607,60"
 260 PRINT : GO SUB 300: PRINT
 270 PRINT "Saufgarde des caract
eres : SAVE nom CODE ";des;",768
"
 290 STOP
 300 FOR i=32 TO 127
 310 PRINT CHR$ i;" ";
 320 NEXT i
 330 RETURN
9000 SAVE "cara" LINE 1
9010 SAVE "cara" LINE 1
9020 CLS : PRINT "Verification"
9030 VERIFY "cara"
9040 VERIFY "cara"
```

Med.B1

A very interesting and useful program for those who have modems and frequent the world of bulletin boards. Most bulletin boards are in a 80 column format. This can raise havoc when downloading an article from a 80 column to the 2068 which uses a 64 column format. If the article is downloaded to a file it then can be run through this program to weed out any unnecessary and miscellaneous characters. This is absolutely essential if you want edit the file with a program such as MSCRIPT VI.

David Solly

```
  5 LET a=28000
 10 CLS : PRINT "What is the na
me of the file?": INPUT a$
 20 PRINT : PRINT a$
 30 PRINT : PRINT "What is the
length of the file?": INPUT b
 40 PRINT : PRINT b
 45 LET c=a+b
 50 PRINT : PRINT "Loading file
: ",a$
 60 LOAD a$CODE a,b
 70 CLS : PRINT "Working: Pleas
e wait."
 75 LET counter=0
 80 FOR z=a TO c
 82 IF PEEK z=13 OR PEEK z=10 T
HEN GO TO 100
 85 POKE 46927+counter,PEEK z
 95 LET counter=counter+1
100 NEXT z
380 CLS : PRINT "Work done!"'"D
o you wish to see the file?": IN
PUT a$
385 IF a$="n" OR a$="N" THEN GO
TO 500
400 REM Print the new file
405 LET a=46927
410 FOR z=a TO a+counter
420 PRINT CHR$ PEEK z;
430 NEXT z
440 PRINT : PRINT "That's all!"
''"Hit any key for save routine.
"
450 PAUSE 0
500 REM Save new file
510 CLS : PRINT "File name?": I
NPUT a$
520 IF a$="" THEN PRINT "You ha
ve to enter a name!": PAUSE 200:
 GO TO 500
530 PRINT "Saving ''";: PRINT a
$;: PRINT "'' CODE";a;",";counte
r
540 SAVE a$CODE a,counter
 GO TO 500
530 PRINT "Saving ''";: PRINT a
$;: PRINT "'' CODE";a;",";counte
r
540 SAVE a$CODE a,counter
550 SAVE a$CODE a,counter
560 CLS : PRINT "Verification:
Rewind and play."
570 VERIFY a$CODE a,counter
580 VERIFY a$CODE a,counter
590 PRINT : PRINT "Verified OK!
"
595 STOP
9000 REM Save this program
9010 SAVE "MEd.B1" LINE 1
9020 SAVE "MEd.B1" LINE 1
9030 CLS : PRINT "Verification:
Rewind and play."
9040 VERIFY "MEd.B1"
9050 VERIFY "MEd.B1"
9060 PRINT : PRINT "Verified OK!
": STOP
```

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Dues are the same as last year ($20.00) which entitles you to borrowing any of our many subscriptions, use of our computer programs, newsletters as well as the expertise of members.

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Please list your current knowledge of the following programming languages: (eg. expert, good, fair, poor)

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